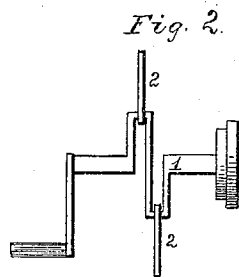
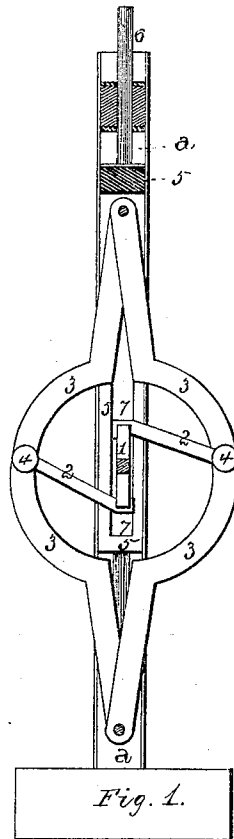


L. V. LEWIS.
Mechanical Movements.

No. 141,800.

Patented August 12, 1873.



WITNESSES.

W. R. Duhamel
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UNITED STATES PATENT OFFICE.

LEDYARD V. LEWIS, OF SUN PRAIRIE, WISCONSIN.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **141,800**, dated August 12, 1873; application filed July 18, 1873.

To all whom it may concern:

Be it known that I, LEDYARD V. LEWIS, of Sun Prairie, county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Mechanical Movements, of which the following is a specification:

The nature of my invention relates to an improvement in mechanical movements for converting rotary into reciprocating motion; and it consists in a double-cranked axle connected by two connecting-rods to double toggle-jointed levers, one end of the levers being stationary, while the other is attached to a slide, to which the pitman is secured. By revolving the axle the levers are made to open and close, and thus cause the pitman to reciprocate back and forth.

The accompanying drawings represent my invention.

a represents the frame, of any suitable construction, in which is journaled a double-cranked axle, 1, to be operated by belt, crank, or lever power, as may be desired. To each crank is attached a connecting-rod, 2, the outer ends of which are secured to the double toggle-jointed levers 3 at the joints 4. The lower ends of these levers are pivoted to the frame *a*, so that they will remain stationary, while the upper ones are attached to the slide 5, to which the pitman 6 is secured.

Upon causing the axle to revolve, the connecting-rods draw the levers 3 in and out so as to open and close, giving a reciprocating motion to their upper end, which is imparted through the slide to the pitman.

Where this device is employed to transmit motion in both directions, a pitman will be secured to each end of the slide so as to make it double-acting, the slide having a slot, 7, cut through it, so that it will pass over the axle.

This movement is applicable to jig-saws, mortising-machines, locomotives, power pitmen, punches, and many other uses.

Having thus described my invention, I claim—

1. The combination of the double-cranked axle, connecting-rods, toggle-levers, and slide, when combined substantially as set forth.

2. A mechanical movement in which the parts are combined and arranged to operate substantially as shown and described.

In testimony that I claim the foregoing as my invention I hereunto affix my signature this 14th day of July, 1873.

L. V. LEWIS.

Witnesses:

GEORGE W. BULL,
CHARLES S. CROSSE.